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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/897,904	07/05/2001	Tatsuo Fukui	109686	1427

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EXAMINER

STOCK JR, GORDON J

ART UNIT

PAPER NUMBER

2877

DATE MAILED: 01/30/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

09/897,904

FUKUI, TATSUO

Examiner

Art Unit

Gordon J Stock

2877

*-- The MAILING DATE of this communication appears on the cover sheet with the corresponding address --***Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) Responsive to communication(s) filed on \_\_\_\_.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) Claim(s) 1-5 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_ is/are allowed.

6) Claim(s) 1-5 is/are rejected.

7) Claim(s) \_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on 05 July 2001 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on \_\_\_\_ is: a) approved b) disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some \* c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1) Notice of References Cited (PTO-892)  
2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_.

4) Interview Summary (PTO-413) Paper No(s) \_\_\_\_.  
5) Notice of Informal Patent Application (PTO-152)  
6) Other: \_\_\_\_.

## DETAILED ACTION

### *Specification*

1. The specification is objected to for the following: "L/S" is not defined anywhere in the disclosure. Correction is required.

### *Drawings*

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference characters "31" and "29" of Figure 1 have both been used to designate the same area of 30. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.
3. The drawings are objected to because it is unclear as to what 10 of Fig. 1 designates. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### *Claim Rejections - 35 USC § 103*

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
5. **Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bareket (6,023,338) in view of Tanaka (4,668,077).**

As for **claim 1**, Bareket in an overlay alignment measurement invention discloses the following: an irradiation optical system for irradiating the measurement mark with a beam of irradiation; an image forming optical system for forming an image of the mark; an imaging device for photographing the image of the mark; an image processing device for measuring the positional deviation between the first and second mark (Figs. 5a).

In addition, Bareket discloses a focus actuator (260 in Figs. 5a) that will adjust the focus of the system; however, Bareket is silent concerning a field area adjustment mechanism. Tanaka in a projection apparatus teaches a field stop for adjusting illumination area. Therefore, it would be obvious to one skilled in the art at the time the invention was made to have the apparatus comprise an adjustable field stop in order to adjust the illumination area.

As for **claim 2**, Bareket in view of Tanaka discloses everything as above (see **claim 1**). In addition, Bareket discloses an imaging position adjustment mechanism for adjusting the position of said imaging device, a focus actuator (260 in Figs. 5a). Bareket in view of Tanaka discloses a field stop within an illumination system that is adjustable and a field stop mechanism (see **claim 1** above).

As for the positioning of the field stop and an imaging surface of said imaging device, Bareket in view of Tanaka are silent. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have said field stop and an imaging surface of said imaging device disposed in optically conjugate positions since it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70. Also it would have been obvious to one skilled in the art at the time the invention was made

to have said field stop and imaging surface disposed in optically conjugate positions in order to control the illumination area.

Bareket in view of Tanaka are silent concerning the adjustment of said imaging device in accordance with the field stop positional adjustment. However, a focus actuator changes focus of the system. The field stop changes the illumination area of the system. It would be obvious to one skilled in the art that the imaging position adjustment mechanism adjusts the imaging device with the field stop adjustment, for a change of focus will need to be actuated upon change of illumination area.

6. **Claims 3-5** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Bareket (6,023,338)** in view of **Tanaka (4,668,077)** and further in view of **Iwanaga et al. (5,920,398)**.

As for **claims 3 and 5**, Bareket in view of Tanaka disclose everything as above (see **claims 1 and 2**). They are silent concerning adjusting the image field area on the basis of an asymmetric focus characteristic curve of the pattern image. Iwanaga in a surface position detecting method teaches using an asymmetric focus curve to calculate focus correction and to have correct focus detection (col. 12, lines 5-25). Therefore, it would be obvious to one skilled in the art at the time the invention was made to utilize an asymmetric focus curve to calculate focus correction and have correct focus detection. In addition, it would be obvious to one skilled in the art at the time the invention was made that the image field area adjustment mechanism would adjust the image field based on an asymmetric focus curve in order to correct for the focus error calculated using the asymmetric focus curve.

As for **claim 4**, Bareket in view of Tanaka and further in view of Iwanaga discloses everything as above (see **claim 3**). However, they are silent concerning the adjustment whereas

the characteristic is symmetric to the center of the visual field, an arranging of parts. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to adjust the characteristic to be symmetric to the center of the visual field since it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70.

#### ***Fax/Telephone Numbers***

If the applicant wishes to send a fax dealing with either a proposed amendment or a discussion with a phone interview, then the fax should:

- 1) Contain either a statement "DRAFT" or "PROPOSED AMENDMENT" on the fax cover sheet; and
- 2) Should be unsigned by the attorney or agent.

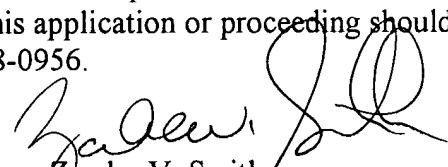
This will ensure that it will not be entered into the case and will be forwarded to the examiner as quickly as possible.

*Papers related to the application may be submitted to Group 2800 by Fax transmission. Papers should be faxed to Group 2800 via the PTO Fax machine located in Crystal Plaza 4. The form of such papers must conform to the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989). The CP4 Fax Machine number is: (703) 308-7722*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gordon J. Stock whose telephone number is (703) 305-4787. The examiner can normally be reached on Monday-Friday, 10:00 a.m. - 6:30 p.m.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

gs  
January 23, 2003



Zandra V. Smith  
Primary Examiner  
Art Unit 2877